

Thomas Jefferson to George Washington, June 18, 1792, Notes, from The Works of Thomas Jefferson in Twelve Volumes. Federal Edition. Collected and Edited by Paul Leicester Ford.

NOTES ON ARTHUR YOUNG'S LETTER¹ J. MSS.

¹ Young wrote to Washington concerning American agriculture, and Jefferson undertook to prepare some notes on the subject, resulting in the above. They were sent to Young, who commented on them as follows:

“Mr. Jefferson's Virginia calculation comes much nearer to the point; but I cannot admit it; he reckons 60 *l.* a year increasing value of negroes, and 156 *l.* a year rise in value of land. These articles may be fact in certain circumstances but they will not do for comparisons. In the first place, to have a considerable value in slaves, is a hazardous capital; and there is no man in the world who would not give 60 *l.* a year on six thousand acres, to be able to change slaves to cows and sheep: he cannot otherwise command labour, and therefore must keep them; but the profit in any other light than labourers, is inadmissible. As to the rise on lands, it may be fair; but taking place equally, perhaps, in Europe, it must not come into the account. During the last ten years, land in England has risen one third in value. Correcting thus Mr. Jefferson's account, his capital pays eleven per cent. as in (D). There are, however, many deductions to be made; as wear and tear of implements, carriage, team, seed, repairs of buildings, white servants, overseers, &c. &c. These ought, as I conjecture, to amount to near 200 *l.* a year, which, if so, would reduce the profit in the gross to about eight per cent.

“But I have a heavier objection than this, and which bears upon the pith of the subject. How can Mr. Jefferson produce annually five thousand bushels of wheat, worth 750 *l.*

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by means of a cattle product of only 125 *l*.? I do not want to come to America, to know that this is simply impossible: at the commencement of a term it may do, but how long will it last? This is the management that gives such products, as eight and ten bushels an acre. Arable land can yield wheat only by means of cattle and sheep; it is not dung that is wanted so much as a change of products: repose under grasses is the soul of management; and all cleaning and tillage to be given in the year that yields green winter food. By such a system, you may produce, by means of forty oxen and five hundred sheep, five thousand bushels of wheat; and if you raise the oxen to fifty, and sheep to six hundred, you may have so much more wheat; but it is only by increasing cattle that you can increase wheat permanently. 125 *l*. from cattle to 750 *l*. from wheat, would reduce the finest farm in the world to a caput mortuum; that is to say to ten bushels an acre which must be nearly such.”

These comments Washington submitted to Jefferson, who wrote Washington in reply:

“ Philadelphia, June 28, 1793.

“ Dear Sir,—I should have taken time ere this, to have considered the observations of Mr. Young, could I at this place have done it in such a way as would satisfy either him or myself. When I wrote the notes of the last year, I had never before thought of calculating what were the profits of a capital invested in Virginia agriculture. Yet that appeared to be what Mr. Young most desired. Lest therefore, no other of those whom you consulted for him, should attempt such a calculation, I did it; but being at such a distance from the country of which I wrote, and having been absent from that, and from the subject in consideration, many years, I could only, for my facts, recur to my own recollection, weakened by time, and very different applications, and I had no means here of correcting my facts. I, therefore, hazarded the calculation, rather as an essay of the mode of calculating the profits of a Virginia estate, than as an operation which was to be ultimately relied on. When I went last to Virginia, I put the press copy of those notes into the hands of the most skilful and successful farmer in the part of the country

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of which I wrote. He omitted to return them to me, which adds another impediment to my resuming the subject here. But indeed, if I had them, I could only present the same facts, with some corrections, and some justifications of the principles of calculation. This would not, and, ought not, to satisfy Mr. Young. When I return home, I shall have time and opportunity of answering Mr. Young's inquiries fully. I will first establish the facts, as adapted to the present times, and not to those to which I was obliged to recur by recollection, and I will make the calculation on rigorous principles. The delay necessary for this, will, I hope, be compensated by giving something which no endeavors on my part shall be wanting to make worthy of confidence. In the mean time, Mr. Young must not pronounce too hastily on the impossibility of an annual production of 750 / worth of wheat, coupled with a cattle product of 125 /. My object was to state the product of a good farm, under good husbandry, as practised in my part of the country. Manure does not enter into this, because we can buy an acre of new land cheaper than we can manure an old one. Good husbandry with us, consists in abandoning Indian corn and tobacco; tending small grain, some red clover, fallowing, and endeavouring to have, while the lands are at rest, a spontaneous cover of white clover. I do not present this as a culture judicious in itself, but as good, in comparison with what most people there pursue. Mr. Young has never had an opportunity of seeing how slowly the fertility of the original soil is exhausted, with moderate management of it. I can affirm, that the James river low-grounds, with the cultivation of small grain, will never be exhausted; because we know, that, under that cultivation, we must now and then take them down with Indian corn, or they become, as they were originally, too rich to bring wheat. The high-lands where I live, have been cultivated about sixty years. The culture was tobacco and Indian corn, as long as they would bring enough to pay the labour; then they were turned out. After four or five years rest, they would bring good corn again, and in double that time, perhaps, good tobacco. Then they would be exhausted by a second series of tobacco and corn. Latterly we have begun to cultivate small grain; and excluding Indian corn, and following, such of them as were originally good, soon rise up to fifteen or twenty bushels the acre. We allow that every labourer will manage ten acres of wheat, except at harvest. I have no doubt but

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the coupling cattle and sheep with this, would prodigiously improve the produce. This improvement, Mr. Young will be better able to calculate than any body else. I am so well satisfied of it myself, that having engaged a good farmer from the head of Elk (the style of farming there you know well), I mean in a farm of about five hundred acres of cleared land, and with a dozen labourers to try the plan of wheat, rye, potatoes, clover, with a mixture of some Indian corn with the potatoes, and to push the number of sheep. This last hint I have taken from Mr. Young's letters, which you have been so kind as to communicate to me. I had never before considered, with due attention, the profit from that animal. I shall not be able to put the farm into that form exactly the ensuing autumn, but against another I hope I shall; and I shall attend with precision to the measures of the ground, and to the product, which may, perhaps, give you something hereafter to communicate to Mr. Young, which may gratify him; but I will furnish the ensuing winter, what was desired in Mr. Young's letter of January 17, 1793."

[June 18, 1792.]

Pa. 3. Is the labour (of Negroes @ £9. sterl.) to be commanded in any amount?—if taken by the year it may be commanded in any amount: but not if wanted on particular occasions only as for harvest, for particular dressings of the land, &c.

Pa. 4. The labour of a negro Mr. Young reckons cent. per cent dearer than the labour of England.—To the hirer of a negro man his hire will cost £9. and his subsistence, cloathing & tools £6. Making £15. sterl. or at the most it may sometimes be £18.—To the owner of a negro his labour costs as follows. Suppose a negro man of 25. years of age costs £75. sterling: he has an equal chance to live 30. years according to Buffon's table; so that you lose your principal in 30. years. Then say.

£ Int. of £75. annually 3. 15 One thirtieth annually of the principal 2. 10 Subsistence, clothes, &c., annually 6. 12. 5

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There must be some addition to this to make the labour equal to that of a white man, as I believe the negro does not perform quite as much work, nor with as much intelligence.— But Mr. Young reckons a laboring man in England £8. & his board £16. making £24.

Pa. 5. “In the instances of mountain land, the expressions seem to indicate waste land unbuilt & uninclosed.” If Mr. Young has reference here to the notes which Th: J. gave to the President on the subject

of mountain land, the following explanation is necessary. The lands therein contemplated are generally about one half cleared of the timber which grew on them, say all the land of the first quality & half that of the middling quality. This half is for the most part inclosed with rail fences which do not last long (except where they are of chestnut) but are easily repaired or renewed. The houses on them for the use of the farm are so slight and of so little worth that they are thrown into the bargain without a separate estimate. The same may be said of the farmer's house, unless it be better than common. When it is of considerable value, it adds to the price of the land, but by no means it's whole value. With respect to the soil I saw no uplands in England comparable to it. My travels there were from Dover to London, & on to Birmingham, making excursions of 20, or 30. miles each way. At Edgehill in Warwickshire my road led me over a red soil sometimes like this, as well as I recollect. But it is too long ago to speak with certainty.

Pa. 7. That “in America farmers look to labour much more than to land, is new to me.”— But it is an important circumstance. Where land is cheap, & rich, & labour dear, the same labour, spread in a slighter culture over 100. acres, will produce more profit than if concentrated by the highest degree of cultivation on a small portion of the lands. When the virgin fertility of the soil becomes exhausted, it becomes better to cultivate less & well. The only difficulty is to know

at what point of deterioration in the land, the culture should be increased, and in what degree.

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Pa. 10. "Can you sell your beef & mutton readily?" The market for them, fresh and in quantity, is not certain in Virginia. Beef well salted will generally find a market, but salted mutton is perhaps unknown.

Pa. 11. "Mutton dearer than beef." Sheep are subject to many diseases which carry them off in great numbers. In the middle & upper parts of Virginia they are subject to the wolf, & in all parts of it to dogs. These are great obstacles to their multiplication. In the middle and upper parts of the country the carcass of the beef is raised on the spontaneous food of the forests, and is delivered to the farmer in good plight in the fall, often fat enough for slaughter. Hence its cheapness. Probably however sheep, properly attended to, would be more profitable than cattle as Mr. Young says they have not been attended to as they merited.

Pa. 13. Mr Young calculates the employment of £5040. worth of land and £1200. farmer's capital, making an aggregate capital of £6240. in England, which he makes yield 5. pr. cent extra, or 10. pr. cent on ye. whole. I will calculate, in the Virginia way, the employment of the same capital, on a supposition of good management, in the manner of the country.

1. Supposing negro laborers to be hired.

2. Supposing them to be bought.

1. Suppose labourers to be hired, one half men @ £18. the other half women @ £14. for labor, clothg. (I always mean sterling money).

Int. of £4160. for 3310. as. of land @ 25/ye. acre £208—0—0

of 2080/6240 for farmer's capital of stock, tools, &c. 104—0—0

Taxes @ 7d. the acre (I do not know what they are) 96—10—0

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Hire of 33. labourers @ £16 528—0—0

936—10

Produce to be sold annually.

£

Wheat 6600. bushels @ 3/ 990

Meat & other articles @ £5. for each laborer 165 1155—0

Net profit over & above the 5. Pr. cent above charged 219—10

Add annual rise in the value of lands 165—10

Real profit over & above the 3. pr. cent above charged. 385—

Which is 6 # per cent extra, or 11 # pr. cent on the whole capital.

2. Suppose labourers to be bought, one half men, & one half women @ £60. sterl, on an average.

£

Int. of £3125. for 2500. as. of land @ 25/ 156—5—0

of 1562—10, farmer's capital of stock, utensils, &c. 78—2—6

of 1500/6187 = /10 for purchase of 25. laborers 75

Subsistence, clothing, &c 150 225—0—0

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[I allow nothing for losses by death, but on the contrary shall presently take credit 4. pr. cent pr. annum for their increase over & above keepg. up their own numbers.]

Taxes @7d. the acre 72—18—4

532—5—10

Produce to be sold annually.

£

Wheat 5000 bush. @ 3/ 750

Meat and other articles @ £5. for each labourer 125 875—0—0

Net profit over & above the 5. pr. cent above charged 342—15—10

Add 5 pr. cent annual rise in the value of land 156—5—0

4. pr. cent increase of negroes more yn. keepg. up original number 60—0

Real profit over & above the 5. pr. cent above charged 559—0—10

Which is 9. pr. cent extra, or 14. pr. cent on the whole capital.

In the preceding estimate I have supposed that 200. bushels of wheat may be sold for every labourer employed, which may be thought too high. I know it is too high for common land, & common management, but I know also on good land & with good management it has been done thro' a considerable neighborhood and for many years. On the other hand I have overrated the cost of laboring negroes, and I presume the taxes also are overrated. I have observed that our families of negroes double in about 25. years, which

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is an increase of the capital, invested in them, of 4. per cent over & above keeping up the original number.

I am unable to answer the queries on page — as to the expenditure necessary to make an acre of forest land maintain one, two, or three sheep. I began an experiment of that kind in the year 1783. clearing out the under-growth, cutting up the fallen wood but leaving all the good trees. I got through about 20. or 30. acres and sowed it with white clover & green wood, and intended to have gone on through a forest of 4. or 500. acres. The land was excessively rich, but too steep to be cultivated. In spite of total neglect during my absence from that time to this, most of it has done well. I did not note how much labour it took to prepare it; but I am sure it was repaid by the fuel it yielded for the family. The richness of the pasture to be thus obtained, will always be proportioned to that of the land. Most of our forest is either middling, or poor. It's enclosure with a wood fence costs little, as the wood is on the spot.